

FEDERAL RESERVE SYSTEM

[Docket No. OP-1636]

Federal Reserve Bank Services

AGENCY: Board of Governors of the Federal Reserve System.

ACTION: Notice.

SUMMARY: The Board of Governors of the Federal Reserve System (Board) has approved the private sector adjustment factor (PSAF) for 2019 of \$17.8 million and the 2019 fee schedules for Federal Reserve priced services and electronic access. These actions were taken in accordance with the Monetary Control Act of 1980, which requires that, over the long run, fees for Federal Reserve priced services be established on the basis of all direct and indirect costs, including the PSAF.

DATES: The new fee schedules become effective January 2, 2019.

FOR FURTHER INFORMATION CONTACT: For questions regarding the fee schedules: David C. Mills, Deputy Associate Director, (202) 530-6265; Amanda Holcombe, Financial Institution Policy Analyst, (202) 912-4625; Emily Massaro, Financial Institution Policy Analyst, (202) 452-2493, Division of Reserve Bank Operations and Payment Systems. For questions regarding the PSAF: Lawrence Mize, Deputy Associate Director, (202) 452-5232; Max Sinthorntham, Senior Financial Institution Policy Analyst, (202)

452-2864, Division of Reserve Bank Operations and Payment Systems. For users of Telecommunications Device for the Deaf (TDD) only, please call (202) 263-4869. Copies of the 2019 fee schedules for the check service are available from the Board, the Federal Reserve Banks, or the Reserve Banks' financial services web site at www.frbsservices.org.

I. Supplementary Information:

Private Sector Adjustment Factor, Priced Services Cost Recovery, and Overview of 2019 Price Changes

A. Overview — Each year, as required by the Monetary Control Act of 1980, the Reserve Banks set fees for priced services provided to depository institutions. These fees are set to recover, over the long run, all direct and indirect costs and imputed costs, including financing costs, taxes, and certain other expenses, as well as the return on equity (profit) that will have been earned if a private business firm provided the services. The imputed costs and imputed profit are collectively referred to as the private-sector adjustment factor (PSAF). From 2008 through 2017, the Reserve Banks recovered 101.9 percent of their total expenses (including imputed

costs) and targeted after-tax profits or return on equity (ROE) for providing priced services.¹

Table 1 summarizes 2017 actual, 2018 estimated, and 2019 budgeted cost-recovery rates for all priced services. Cost recovery is estimated to be 101.0 percent in 2018 and budgeted to be 100.9 percent in 2019.

Table 1

Aggregate Priced Services Pro Forma Cost and Revenue Performance ^a (dollars in millions)					
YEAR	1 ^b REVENUE	2 ^c TOTAL EXPENSE	3 NET INCOME (ROE) [1-2]	4 ^d TARGETED ROE	5 ^{e,f} RECOVERY RATE AFTER TARGETED ROE [1/(2+4)]
2017 (actual)	441.6	419.4	22.2	4.6	104.1%
2018 (estimate)	441.7	432.0	9.7	5.2	101.0%
2019 (budget)	440.2	430.8	9.4	5.4	100.9%

a Calculations in this table and subsequent pro forma cost and revenue tables may be affected by rounding.

b Revenue includes imputed income on investments when equity is imputed at a level that meets minimum capital requirements and, when combined with liabilities, exceeds total assets (attachment 1). For 2018, the projected revenue assumes implementation of the proposed fee changes.

c The calculation of total expense includes operating, imputed, and other expenses. Imputed and other expenses include taxes, Board of Governors' priced services expenses, the cost of float, and interest on imputed debt, if any. Credits or debits related to the accounting for pension plans under ASC 715 are also included.

d Targeted ROE is the after-tax ROE included in the PSAF.

e The recovery rates in this and subsequent tables do not reflect the unamortized gains or losses that must be recognized in accordance with ASC 715. Future gains or losses, and their effect on cost recovery, cannot be projected.

f For 2019, credits or debits related to the accounting for pension plans under ASC 715 include service cost only with the adoption of ASU 2017-07 *Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost* (Topic 715).

¹ The 10-year recovery rate is based on the pro forma income statements for Federal Reserve priced services published in the Board's *Annual Report*. Effective December 31, 2006, the Reserve Banks implemented Statement of Financial Accounting Standards (SFAS) No. 158: *Employers' Accounting for Defined Benefit Pension and Other Postretirement Plans* [Accounting Standards Codification (ASC) 715 *Compensation – Retirement Benefits*], which resulted in recognizing a cumulative reduction in equity related to the priced services' benefit plans. Including this cumulative reduction in equity from 2008 to 2017 results in cost recovery of 94.7 percent for the ten-year period. This measure of long-run cost recovery is also published in the Board's *Annual Report*.

Table 2 provides an overview of cost-recovery budgets, estimates, and performance for the 10-year period from 2008 to 2017, 2017 actual, 2018 budget, 2018 estimate, and 2019 budget by priced service.

Table 2

Priced Services Cost Recovery (percent)					
PRICEDSERVICE	2008-2017	2017 ACTUAL	2018 BUDGET ^A	2018 ESTIMATE	2019 BUDGET ^B
All services	101.9	104.1	100.1	101.0	100.9
Check	103.5	107.0	101.6	101.7	101.5
FedACH	98.5	99.8	96.1	98.0	101.8
Fedwire Funds and NSS	101.5	106.2	103.9	105.0	100.7
Fedwire Securities	102.2	103.6	97.6	96.5	94.7

A The 2018 budget figures reflect the final budgets as approved by the Board in December 2017.

B The 2019 budget figures reflect preliminary budget information from the Reserve Banks. The Reserve Banks will submit final budget data to the Board in November 2018, for Board consideration in December 2018.

1. *2018 Estimated Performance* — The Reserve Banks estimate that they will recover 101.0 percent of the costs of providing priced services in 2018, including total expense and targeted ROE, compared with a 2018 budgeted recovery rate of 100.1 percent, as shown in table 2. Overall, the Reserve Banks estimate that they will fully recover actual and imputed costs and earn net income of \$9.7 million, compared with the targeted ROE of \$5.2 million. The Reserve Banks estimate that the check service and the Fedwire[®] Funds and National Settlement Services will achieve full cost recovery; however, the Reserve Banks continue to estimate that the FedACH[®] Service and the Fedwire Securities Service will not achieve full cost recovery. Consistent

with recent years, the FedACH Service will not achieve full cost recovery because of investment costs associated with the multiyear technology initiative to modernize its processing platform.² This investment is expected to enhance efficiency, the overall quality of operations, and the Reserve Banks' ability to offer additional services to depository institutions. The Reserve Banks estimate that the Fedwire Securities Service will not achieve full cost recovery because of ongoing market structure changes and investment costs associated with initiatives to promote operational resiliency.

2. 2019 Private-Sector Adjustment Factor — The 2019 PSAF for Reserve Bank priced services is \$17.8 million. This amount represents a decrease of \$1.1 million from the 2018 PSAF of \$18.9 million. This decrease is primarily the result of a decrease in the total cost of debt and partially offset by an increase in Board of Governors expenses.

3. 2019 Projected Performance — The Reserve Banks project a priced services cost recovery rate of 100.9 percent in 2019, with a net income of \$9.4 million and targeted ROE of \$5.4 million. The Reserve Banks project that the price changes will result in a 2.5 percent average price

² The Reserve Banks have been engaged in a multiyear technology initiative to modernize the FedACH processing platform by migrating the service from a mainframe system to a distributed computing environment.

increase for customers. The Reserve Banks project that each of the individual service lines, other than the Fedwire Securities Service, will fully recover their costs. The Reserve Banks anticipate that the FedACH technology modernization initiative will conclude in 2019, allowing for a projected return to cost recovery for the FedACH Service. Although the Fedwire Securities Service is not budgeted to fully cover its costs in 2019 because of volume declines driven by market changes, the service is projected to recover costs over the long run.³

The primary risks to the Reserve Banks' ability to achieve their targeted cost-recovery rates are unanticipated volume and revenue reductions and the potential for cost overruns from new and ongoing improvement initiatives. In light of these risks, the Reserve Banks will continue to refine their business and operational strategies to manage operating costs, to increase product revenue, and to capitalize on efficiencies gained from technology initiatives.

4. *2019 Pricing* — The following summarizes the Reserve Banks' changes in fee schedules for priced services in 2019:

³ Fedwire Securities Service's ten-year average recovery rate in 2019 is 101.6 percent.

As the aggregate impact of market structural changes materializes, the Reserve Banks will take into account subsequent volume changes as well as future anticipated cost allocation adjustments, in order to adjust the Fedwire Securities Service's prices and to continue recovering costs over the long-run.

Check

- The Reserve Banks will reassign the tier placement of 1,116 forward and 240 return endpoints in the FedForward[®] and FedReturn[®] products, respectively.⁴
- The Reserve Banks will lower the average daily forward receipt and return tier volume thresholds approximately 6.0 percent for tiers 1, 2, 3, and 4 for FedForward[®] and FedReturn[®] image cash letter and daily fee deposit options based on the 2019 tier assignments to account for the anticipated continued decline in check deposit volumes.
- The Reserve Banks will increase per-item fees for the FedForward[®] Premium Daily Fee A, B, and C deposit options by \$0.001 for Tier 3 and \$0.003 for Tier 4. The Reserve Banks will also increase the Premium Daily Fee C daily fixed fee by \$200, from \$3,500 to \$3,700.
- The Reserve Banks will increase cash letter fees by \$0.50 for all deadlines on FedForward[®] Standard, Deferred, Dollar-Culled, and Endpoint-Culled image cash letters and FedReturn[®] Standard image cash letters.
- The Reserve Banks will increase the per-item fee for the FedReceipt[®] Premium Delivery 8:00 a.m. EST target by \$0.006

⁴ The Reserve Banks evaluate and set tier assignments annually based on changes in the volume of items received by endpoints.

and per item fees for the Premium Delivery 10:00 a.m. target and Premium Delivery 12:00 noon target by \$0.002.⁵

- The Reserve Banks will increase FedReceipt[®] Electronic Reject Repair fees by \$0.05, increasing the Basic repair from \$0.15 per-item to \$0.20 per-item and increasing the Premium repair from \$0.25 per-item to \$0.30 per-item.
- The Reserve Banks will increase all fees for the FedImage[®] product and certain truncation fees 10.0 percent (rounded to the nearest increment based upon the number of decimal places of the current fee).
- The Reserve Banks will introduce two new fees intended to improve the quality of check deposit processing and reduce errors in adjustment case submissions. The Reserve Banks will introduce a \$0.50 fee for encoding error and duplicate-payment adjustment cases caused by the depository bank's incorrect encoding or duplicate deposit of an item. The Reserve Banks will also introduce a \$2.50 fee for automated adjustment case types that require manual intervention by Reserve Bank staff due to error on the part of the adjusting bank.

FedACH

- The Reserve Banks will offer a new ACH Exception Resolution Service[®] that will provide an automated means for customers to

⁵ The 8:00 a.m. delivery target is expressed in eastern time, while the 10:00 a.m. and 12:00 noon targets are local time.

resolve ACH exceptions. The fee structure will contain fixed and variable elements, as outlined in the ACH fee schedule.

- The Reserve Banks will keep prices at existing levels for all existing priced FedACH products.

Fedwire Funds

- The Reserve Banks will increase the offline send surcharge and offline receive surcharge from \$60.00 to \$65.00.

National Settlement Service (NSS)

- The Reserve Banks will keep prices at existing levels for the priced NSS products.

Fedwire Securities

- The Reserve Banks will increase the agency online transfer fee from \$0.77 to \$0.98.
- The Reserve Banks will increase the automated claims adjustment process (ACAP) fee from \$0.80 to \$1.00.

FedLine[®] Access Solutions

- The Reserve Banks will discontinue offering new FedMail Fax subscriptions.
- The Reserve Banks will discontinue offering the Accounting Totals by Service (ACTS) report.
- The Reserve Banks will discontinue charging à la carte fees for additional FedLine Command server certificates. The Reserve

Banks will provide FedLine Command server certificates as part of FedLine Command packages at no additional cost.

- The Reserve Banks will offer upgraded FedLine Direct[®] Plus and Premier packages, with monthly fees of \$5,500 and \$10,500 respectively, to reflect the incorporation of the Check 21 Large File Delivery service with the FedLine Direct solution. Existing customers may continue to use the legacy FedLine Direct Plus and Premier packages until they migrate to the upgraded packages. The Reserve Banks will also increase the monthly fee for the legacy FedLine Direct Plus package by \$350, from \$3,650 to \$4,000.
- The Reserve Banks will increase the monthly à la carte fee for Network Diversity by \$500, from \$2,000 to \$2,500.

5. *2019 Price Index* — Figure 1 compares indexes of fees for the Reserve Banks' priced services with the GDP price index.⁶ The price index for Reserve Bank priced services is projected to remain relatively flat, with a decrease of less than 1 percent in 2019 from the 2018 level. The price index for Check 21 services is projected to increase approximately 3 percent. The price indexes for the FedACH Service, the Fedwire Funds and National Settlement Services, and the Fedwire Securities Service are projected to decrease approximately 1 percent, 2 percent, and 3 percent, respectively. For

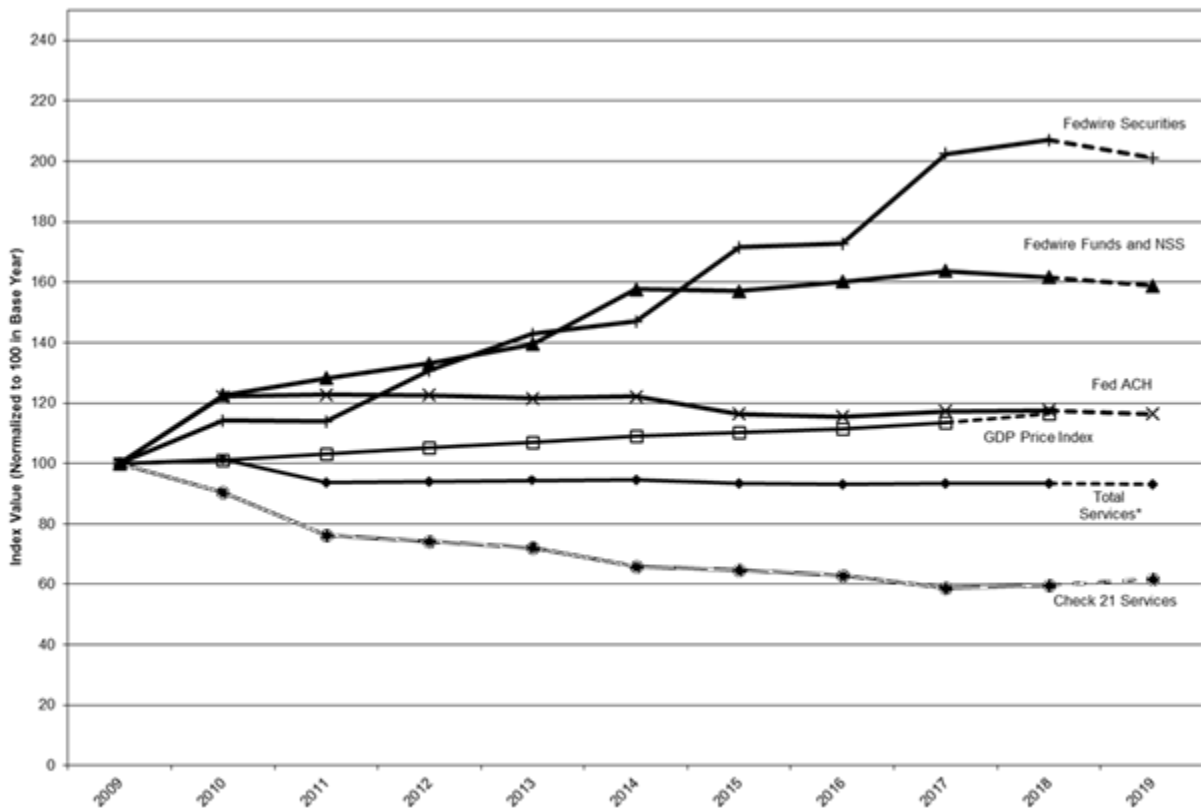
⁶ For the period 2009 to 2017, the GDP price index increased 13.6 percent.

the period 2009 to 2019, the price index for total priced services is expected to decrease nearly 7 percent.

FIGURE 1

2019 PRICE INDEX

PRICE INDEXES FOR FEDERAL RESERVE PRICED SERVICES



* Total Services excludes legacy paper services which now have minimal volume and are expected to generate less than \$1 million in revenue in 2018.

B. Private Sector Adjustment Factor — The imputed debt financing costs, targeted ROE, and effective tax rate are based on a U.S. publicly traded firm market model.⁷ The method for calculating the financing costs in the PSAF requires determining the appropriate imputed levels of debt and equity and then applying the applicable financing rates. In this process, a pro forma balance sheet using estimated assets and liabilities associated with the Reserve Banks' priced services is developed, and the remaining elements that would exist are imputed as if these priced services were provided by a private business firm. The same generally accepted accounting principles that apply to commercial-entity financial statements apply to the relevant elements in the priced services pro forma financial statements.

The portion of Federal Reserve assets that will be used to provide priced services during the coming year is determined using information about actual assets and projected disposals and acquisitions. The priced portion of these assets is determined based on the allocation of depreciation and amortization expenses of each asset class. The priced portion of actual Federal Reserve liabilities consists of postemployment and postretirement

⁷ Data for U.S. publicly traded firms is from the Standard and Poor's Compustat® database. This database contains information on more than 6,000 U.S. publicly traded firms, which approximates the entirety of the U.S. market.

benefits, accounts payable, and other liabilities. The priced portion of the actual net pension asset or liability is also included on the balance sheet.⁸

The equity financing rate is the targeted ROE produced by the capital asset pricing model (CAPM). In the CAPM, the required rate of return on a firm's equity is equal to the return on a risk-free asset plus a market risk premium. The risk-free rate is based on the three-month Treasury bill; the beta is assumed to be equal to 1.0, which approximates the risk of the market as a whole; and the market risk premium is based on the monthly returns in excess of the risk-free rate over the most recent 40 years. The resulting ROE reflects the return a shareholder would expect when investing in a private business firm.

For simplicity, given that federal corporate income tax rates are graduated, state income tax rates vary, and various credits and deductions can apply, an actual income tax expense is not explicitly calculated for Reserve Bank priced services. Instead, the Board targets a pretax ROE that would provide sufficient income to fulfill the priced services' imputed income tax obligations. To the extent that performance results are greater or less than the targeted ROE, income taxes are adjusted using the effective tax rate.

⁸ The pension assets are netted with the pension liabilities and reported as a net asset or net liability as required by ASC 715 *Compensation – Retirement Benefits*.

Capital structure. The capital structure is imputed based on the imputed funding need (assets less liabilities), subject to minimum equity constraints. Short-term debt is imputed to fund the imputed short-term funding need. Long-term debt and equity are imputed to meet the priced services long-term funding need at a ratio based on the capital structure of the U.S. publicly traded firm market. The level of equity must meet the minimum equity constraints, which follow the FDIC requirements for a well-capitalized institution. The priced services must maintain equity of at least 5 percent of total assets and 10 percent of risk-weighted assets.⁹ Any equity imputed that exceeds the amount needed to fund the priced services' assets and meet the minimum equity constraints is offset by a reduction in imputed long-term debt. When imputed equity is larger than what can be offset by imputed debt, the excess is imputed as investments in Treasury securities; income imputed on these investments reduces the PSAF.

Application of the Payment System Risk (PSR) Policy to the Fedwire Services. The Board's PSR policy incorporates the international standards

⁹ The FDIC rule, which was adopted as final on April 14, 2014, requires that well-capitalized institutions meet or exceed the following standards: (1) total capital to risk-weighted assets ratio of at least 10 percent, (2) tier 1 capital to risk-weighted assets ratio of at least 8 percent, (3) common equity tier 1 capital to risk-weighted assets ratio of at least 6.5 percent, and (4) a leverage ratio (tier 1 capital to total assets) of at least 5 percent. Because all of the Federal Reserve priced services' equity on the pro forma balance sheet qualifies as tier 1 capital, only requirements 1 and 4 are binding. The FDIC rule can be located at https://www.fdic.gov/news/board/2014/2014-04-08_notice_dis_c_fr.pdf.

for financial market infrastructures (FMIs) developed by the Committee on Payment and Settlement Systems and the Technical Committee of the International Organization of Securities Commissions in the *Principles for Financial Market Infrastructures*. The revised policy retains the expectation that the Fedwire Services meet or exceed the applicable risk-management standards. Principle 15 states that an FMI should identify, monitor, and manage general business risk and hold sufficient liquid net assets funded by equity to cover potential general business losses so that it can continue operations and services as a going concern if those losses materialize. Further, liquid net assets should at all times be sufficient to ensure a recovery or orderly wind-down of critical operations and services. The Fedwire Services do not face the risk that a business shock would cause the service to wind down in a disorderly manner and disrupt the stability of the financial system. In order to foster competition with private-sector FMIs, however, the Reserve Banks' priced services will hold an amount equivalent to six months of the Fedwire Funds Service's current operating expenses as liquid financial assets and equity on the pro forma balance sheet.¹⁰ Current operating expenses are defined as normal business operating expenses on the

¹⁰ This requirement does not apply to the Fedwire Securities Service. There are no competitors to the Fedwire Securities Service that would face such a requirement, and imposing such a requirement when pricing the securities services could artificially increase the cost of these services.

income statement, less depreciation, amortization, taxes, and interest on debt. Using the Fedwire Funds Service's preliminary 2019 budget, six months of current operating expenses would be \$50.5 million. In 2019, \$38.8 million of equity was imputed to meet the FDIC capital requirements, resulting in an ending equity balance of \$51.8 million. No additional imputed equity was necessary to meet the PSR policy requirement.

Effective tax rate. Like the imputed capital structure, the effective tax rate is calculated based on data from U.S. publicly traded firms. The tax rate is the mean of the weighted average rates of the U.S. publicly traded firm market over the past 5 years.

Debt and equity financing. The imputed short- and long-term debt financing rates are derived from the nonfinancial commercial paper rates from the Federal Reserve Board's H.15 Selected Interest Rates release (AA and A2/P2) and the annual Merrill Lynch Corporate & High Yield Index rate, respectively. The equity financing rate is described above. The rates for debt and equity financing are applied to the priced services estimated imputed short-term debt, long-term debt, and equity needed to finance short- and long-term assets and meet equity requirements.

The 2019 PSAF is \$17.8 million, compared with \$18.9 million in 2018. The decrease of \$1.1 million is attributable to a \$2.8 million decrease in the

cost of debt and a \$0.3 million decrease in sales tax, offset by a \$1.9 million increase in the Board's costs and a \$0.1 million increase in the return on equity. The net \$2.7 million decrease in cost of capital (\$2.8 million less \$0.1 million) resulted from lower funding needs driven by lower long-term assets. The increase in Board costs are attributed to a shift from policy to priced services oversight activities.

The PSAF expense of \$17.8 million, detailed in table 5, reflects \$7.1 million for capital funding, \$7.0 million for BOG expense and \$3.7 million in sales tax expense.

As shown in table 3, 2019 total assets of \$846.6 million increased by \$29.4 million from 2018. The net increase in total assets reflects a \$105 million increase in short-term assets and imputed investments offset by a \$75.6 million decrease in long-term assets.

The increase in the short-term assets is primarily driven by the imputed investments in Treasury securities and Federal Funds. These increases in short-term assets are largely offset by increases in short-term liabilities in the form of deferred credits. There were larger averages for check items in process of collection, and higher average ACH Pre-Fund account balances in the first several months of 2018. The 2019 balances are estimated based on the current account balance average for the first part of 2018.

The net long-term asset decrease of \$75.6 million primarily consists of a \$53.0 million decrease in the net pension asset and a combined \$18.6 million decrease in Furniture and equipment and Leasehold improvements and long-term prepayments. The net pension asset decrease reflects lower plan contributions over the past two years, down from \$720 million to \$240 million in 2018 and from \$480 million to \$180 million in 2019. The decrease in furniture and equipment and Leasehold improvements and long-term prepayments are mainly due to a lower allocation of Reserve Bank assets to the Federal Reserve's priced services.

The capital structure of the 2019 pro forma balance sheet, provided in table 4, is composed of equity of \$51.8 million, or 10 percent of the 2019 risk weighted assets detailed in table 6, and no long-term debt. The 2019 capital structure differs from that of 2018, which was composed of \$57.8 million of equity and \$76.9 million of long-term debt. The 2019 imputed equity required to fund assets and meet the publicly traded firm model capital requirements is \$31.3 million. Long-term debt of \$18.2 million was imputed at the observed market ratio of 58.3 percent. To meet the FDIC capital requirements for a well-capitalized institution, the \$18.2 million of imputed long-term debt was substituted for equity, and additional \$20.5

million equity was imputed. The resulting \$51.8 million total level of equity satisfies the PSR policy requirements for 2019.

The net Accumulated Other Comprehensive Income loss is \$624.3 million, compared with \$637.2 million in 2018. The slight decrease is primarily attributable to the actuarial gains as a result of higher than expected returns on pension assets and a lower discount rate. AOCI is in a net loss position and does not reduce the total imputed equity required to fund priced services assets or fulfill the FDIC equity requirements for a well-capitalized institution.

Table 3

Comparison of Pro Forma Balance Sheets for Budgeted Federal Reserve Priced Services
(millions of dollars – projected average for year)

	2019	2018	Change
Short-term assets			
Receivables	\$ 36.7	\$ 36.6	\$ 0.0
Materials and supplies	0.6	0.5	0.1
Prepaid expenses	11.1	13.0	(1.9)
Items in process of collection ¹¹	95.0	87.0	8.0

¹¹ Credit float, which represents the difference between items in process of collection and deferred credit items, occurs when the Reserve Banks debit the paying bank for transactions prior to providing credit to the depositing bank. Float is directly estimated at the service level.

Total short-term assets	143.4	137.1	6.3
Imputed investments¹²			
Imputed investment in Treasury Securities	\$ 20.5	\$ -	\$ 20.5
Imputed investment in Fed Funds	253.0	174.8	78.2
Total imputed investments	273.5	174.8	98.7
Long-term assets			
Premises ¹³	\$ 104.2	\$ 103.7	\$ 0.2
Furniture and equipment	32.8	38.9	(6.0)
Leasehold improvements and long-term prepayments	87.7	100.3	(12.6)
Net pension asset	23.6	76.6	(53.0)
Deferred tax asset	181.4	185.6	(4.1)
Total long-term assets	429.7	505.3	(75.6)
Total assets	<u>\$ 846.6</u>	<u>\$ 817.2</u>	<u>\$ 29.4</u>
Short-term liabilities			
Deferred credit items	\$ 348.0	\$ 261.8	\$ 86.2
Short-term debt	13.5	14.5	(1.0)
Short-term payables	34.9	35.6	(0.7)
Total short-term liabilities	396.4	311.9	84.5
Long-term liabilities			
Long-term debt	\$ -	\$ 76.9	\$ (76.9)
Postemployment/postretirement benefits and net pension liabilities ¹⁴	398.4	370.5	27.9
Total liabilities	<u>\$ 794.8</u>	<u>\$ 759.3</u>	<u>\$ 35.4</u>
Equity¹⁵	<u>\$ 51.8</u>	<u>\$ 57.8</u>	<u>\$ (6.0)</u>
Total liabilities and equity	<u>\$ 846.6</u>	<u>\$ 817.2</u>	<u>\$ 29.4</u>

¹² Consistent with the Board's PSR policy, the Reserve Banks' priced services will hold and amount equivalent to six months of the Fedwire Funds Service's current operating expenses as liquid net financial assets and equity on the pro forma balance sheet. Six months of the Fedwire Funds Service's projected current operating expenses is \$50.5 million. In 2019, \$38.8 million of equity was imputed to meet the regulatory capital requirements.

¹³ Includes the allocation of Board of Governors assets to priced services of \$2.9 million for 2019 and \$1.1 million for 2018.

¹⁴ Includes the allocation of Board of Governors liabilities to priced services of \$0.8 million for 2019 and \$0.6 million for 2018.

¹⁵ Includes an accumulated other comprehensive loss of \$624.3 million for 2019 and \$637.2 million for 2018, which reflects the ongoing amortization of the accumulated loss in accordance with ASC 715. Future gains or losses, and their effects on the pro forma balance sheet, cannot be projected. See table 5 for calculation of required imputed equity amount.

Table 4
Imputed Funding for Priced-Services Assets
(millions of dollars)

	2019	2018
A. Short-term asset financing		
Short-term assets to be financed		
Receivables	\$ 36.7	\$ 36.6
Materials and supplies	0.6	0.5
Prepaid expenses	11.1	13.0
Total short-term assets to be financed	\$ 48.4	\$ 50.1
Short-term payables	34.9	35.6
Net short-term assets to be financed	\$ 13.5	\$ 14.5

Imputed short-term debt financing ¹⁶	\$	13.5	\$	14.5
B. Long-term asset financing				
Long-term assets to be financed				
Premises	\$	104.2	\$	103.9
Furniture and equipment		32.8		38.9
Leasehold improvements and long-term prepayments		87.7		100.3
Net pension asset		23.6		76.6
Deferred tax asset		181.4		185.6
Total long-term assets to be financed	\$	429.7	\$	505.3
Postemployment/postretirement benefits and net pension liabilities		398.4		370.5
Net long-term assets to be financed	\$	31.3	\$	134.8
Imputed long-term debt ²³	\$	-	\$	76.9
Imputed equity ²³		51.8		57.8
Total long-term financing	\$	51.8	\$	134.8

¹⁶ See table 5 for calculation.

Table 5
Derivation of the 2019 and 2018 PSAF
(dollars in millions)

	2019		2018	
A. Imputed long-term debt and equity				
	Debt	Equity	Debt	Equity
Net long-term assets to finance	\$ 31.3	\$ 31.3	\$ 134.8	\$ 134.8
Capital structure observed in market	58.3%	41.7%	58.2%	41.8%
Pre-adjusted long-term debt and equity	\$ 18.2	\$ 13.1	\$ 78.4	\$ 56.4
Equity adjustments ¹⁷ :				
Equity to meet capital requirements	-	51.8	-	57.8
Adjustment to debt and equity funding given capital requirements ¹⁸	(18.2)	18.2	(1.5)	1.5
Adjusted equity balance	-	31.3	-	57.8
Equity to meet capital requirements ¹⁹	-	20.5	-	-
Total imputed long-term debt and equity	<u>\$ -</u>	<u>\$ 51.8</u>	<u>\$ 76.9</u>	<u>\$ 57.8</u>
B. Cost of capital				
Elements of capital costs				
Short-term debt ²⁰	\$ 13.5 x 2.3% =	\$ 0.3	\$ 14.5 x 1.3% =	\$ 0.2
Long-term debt ^{Error! Bookmark not defined.}	- x 3.9% =	-	76.9 x 3.8% =	3.0
Equity ²¹	51.8 x 13.3% =	6.8	57.8 x 11.7% =	6.7
		\$ 7.1		\$ 9.9
C. Incremental cost of PSR policy				
Equity to meet policy	\$ - x 13.3% =	\$ -	\$ - x 11.7% =	\$ -
D. Other required PSAF costs				
Sales taxes	\$ 3.7		\$ 3.9	
Board of Governors expenses	7.0		5.1	
		10.7		9.0
		<u>\$ 17.8</u>		<u>\$ 18.9</u>
E. Total PSAF				
As a percent of assets		2.1%		2.3%
As a percent of expenses		3.3%		4.1%
F. Tax rates		22.2%		22.7%

¹⁷ If minimum equity constraints are not met after imputing equity based on the capital structure observed in the market, additional equity is imputed to meet these constraints. The long-term funding need was met by imputing long-term debt and equity based on the capital structure observed in the market (see tables 4 and 6). In 2019, the amount of imputed equity met the minimum equity requirements for risk-weighted assets.

¹⁸ Equity adjustment offsets are due to a shift of long-term debt funding to equity in order to meet FDIC capital requirements for well-capitalized institutions.

¹⁹ Additional equity in excess of that needed to fund priced services assets is offset by an asset balance of imputed investments in treasury securities.

²⁰ Imputed short-term debt and long-term debt are computed at table 4.

²¹ The 2019 ROE is equal to a risk-free rate plus a risk premium (beta * market risk premium). The 2019 after-tax CAPM ROE is calculated as 2.01% + (1.0 * 8.32%) = 10.33%. Using a tax rate of 22.2%, the after-tax ROE is converted into a pretax ROE, which results in a pretax ROE of (10.33% / (1-22.2%)) = 13.27%. Calculations may be affected by rounding.

Table 6
Computation of 2019 Capital Adequacy for Federal Reserve Priced Services
(dollars in millions)

	<u>Assets</u>	<u>Risk Weight</u>	<u>Weighted Assets</u>
Imputed investments:			
1-Year Treasury securities ²²	\$ 20.5	-	\$ -
Federal funds ²³	253.0	0.2	50.6
Total imputed investments	<u>273.5</u>		<u>50.6</u>
Receivables	\$ 36.7	0.2	\$ 7.3
Materials and supplies	0.6	1.0	0.6
Prepaid expenses	11.1	1.0	11.1
Items in process of collection	95.0	0.2	19.0
Premises	104.2	1.0	104.2
Furniture and equipment	32.8	1.0	32.8
Leasehold improvements and long-term prepayments	87.7	1.0	87.7
Net pension asset	23.6	1.0	23.6
Deferred tax asset	<u>181.4</u>	1.0	<u>181.4</u>
 Total	 <u><u>\$ 846.6</u></u>		 <u><u>\$ 518.3</u></u>
Imputed equity:			
Capital to risk-weighted assets	10.0%		
Capital to total assets	6.1%		

²² If minimum equity constraints are not met after imputing equity based on all other financial statement components, additional equity is imputed to meet these constraints. Additional equity imputed to meet minimum equity requirements is invested solely in Treasury securities. The imputed investments are similar to those for which rates are available on the Federal Reserve's H.15 statistical release, which can be located at <http://www.federalreserve.gov/releases/h15/data.htm>.

²³ The investments are imputed based on the amounts arising from the collection of items prior to providing credit according to established availability schedules.

C. *Check Service* — Table 7 shows the 2017 actual, 2018 estimated, and 2019 budgeted cost-recovery performance for the commercial check service.

Table 7

Check Service Pro Forma Cost and Revenue Performance (dollars in millions)					
YEAR	1 REVENUE	2 TOTAL EXPENSE	3 NET INCOME (ROE) [1-2]	4 TARGETED ROE	5 RECOVERY RATE AFTER TARGETED ROE [1/(2+4)]
2017 (actual)	142.0	131.3	10.7	1.4	107.0%
2018 (estimate)	133.2	129.5	3.8	1.5	101.7%
2019 (budget)	128.3	124.8	3.4	1.5	101.5%

1. *2018 Estimate* — The Reserve Banks estimate that the check service will recover 101.7 percent of total expenses and targeted ROE, compared with a 2018 budgeted recovery rate of 101.6 percent. The expected decline in check volumes processed by the Reserve Banks continues to influence the check service's cost recovery.

Through August, total commercial forward and total commercial return check volumes were 7.6 percent and 7.2 percent lower, respectively, than they were during the same period last year. Consistent with anticipated fourth-quarter declines, for full-year 2018, the Reserve Banks estimate that their total forward check volume will decline 7.6 percent (compared with a budgeted decline of 4.7 percent) and their total return check volume will decline 7.7 percent (compared with a budgeted decline of 3.5 percent) from

2017 levels.²⁴ While these volume declines will affect budgeted total revenue, the Reserve Banks estimate that total expenses will also be lower given the decline in those expenses directly correlated with volumes as well as the continued recognition of operational efficiencies. This has allowed for close alignment between budgeted and estimated 2018 cost recovery.

2. 2019 Pricing — The Reserve Banks expect the check service to recover 101.5 percent of total expenses and targeted ROE in 2019. The Reserve Banks project revenue to be \$128.3 million, a decline of 3.7 percent from the 2018 estimate. This decline is driven in part by anticipated accelerating decline in the overall number of checks written, as well as by competition from correspondent banks, aggregators, and direct exchanges.²⁵ Total expenses for the check service are projected to be \$124.8 million, a decrease of \$4.7 million, or 3.6 percent, from 2018 expenses, primarily because of reduced operating costs, including cost savings associated with the Reserve Banks' customer support services.

The Reserve Banks evaluate and set tier assignments annually based on changes in the volume of items received by endpoints. In 2019, the Reserve

²⁴ Total Reserve Bank forward check volumes are expected to be 4.8 billion in 2018. Total Reserve Bank return check volumes are expected to be 28.9 million in 2018.

²⁵ The Reserve Banks estimate that total commercial forward check volumes in 2019 will decline 8.5 percent, to 4.4 billion, and total commercial return check volumes will decline 7.5 percent, to 26.7 million in 2019.

Banks will reassign the tier placement of 1,116 forward and 240 return endpoints in the FedForward and FedReturn products, respectively.²⁶ Based on these 2019 tier assignments, the Reserve Banks will increase the FedForward Premium Daily Fee A, B, and C per item fees by \$0.001 for Tier 3 and \$0.003 for Tier 4, while also increasing to the Premium Daily Fee C daily fixed fee by \$200, from \$3,500 to \$3,700. These price increases are intended to better align pricing between premium daily and standard deposit options.

The Reserve Banks will also lower the average daily forward receipt and return volume thresholds by approximately 6.0 percent for tiers 1, 2, 3, and 4 for FedForward[®] and FedReturn[®] image cash letter and daily fee deposit options based on the 2019 tier assignments.²⁷ These changes are intended to account for the anticipated continued decline in check deposit volumes.

Tables 8, 9, 10, and 11 show the 2018 volume thresholds and the 2019 thresholds for the four tiered pricing structures.

²⁶ The tiers for 2019 are available at <https://www.frbsservices.org/resources/fees/check-2019.html>.

²⁷ As part of the Reserve Banks' 2016 restructured FedForward and FedReturn fee schedules, the Reserve Banks use a volume-based tiered pricing structure to determine per-item fees based on the average daily receipt or return volume an endpoint receives from chartered institutions through the Reserve Banks. Tiers for the three premium variations of the Reserve Banks' daily subscription fee deposit options (FedForward Premium Daily Fee A, B, and C) are based only on volume received by the Reserve Banks' top 15 customers, which represent the likely users of the deposit options. These premium daily fee options include a fifth tier, Tier 0, composed of routing numbers for which the Reserve Banks currently receive little to no volume from the specified subset of Reserve Bank customers (and which therefore cannot currently be assigned to the other tiers with sufficient predictability). Tier 0 is evaluated annually, along with all other tiers and endpoints, and endpoints cannot be placed in Tier 0 if they have previously been assigned to one of the other tiers.

Table 8

FedForward Standard Deposit Tier Volume Thresholds		
<i>Applicable to Standard ICL, Premium ICL, Deferred ICL, Dollar-Culled ICL, Endpoint-Culled ICL, Standard Daily Fee A, and Standard Daily Fee B deposit options</i>		
TIER	2018 AVERAGE DAILY FORWARD RECEIPT VOLUME ITEMS/DAY	2019 AVERAGE DAILY FORWARD RECEIPT VOLUME ITEMS/DAY
1	Over 65,000	Over 61,000
2	10,001 - 65,000	9,401 - 61,000
3	750 - 10,000	700 - 9,400
4	Less than 750	Less than 700

Table 9

FedForward Premium Daily Deposit Option Tier Volume Thresholds		
<i>Applicable to Premium Daily Fee A, Premium Daily Fee B, and Premium Daily Fee C deposit options</i>		
TIER	2018 AVERAGE DAILY FORWARD RECEIPT VOLUME ITEMS/DAY	2019 AVERAGE DAILY FORWARD RECEIPT VOLUME ITEMS/DAY
0	* See explanation below	* See explanation below
1	Over 25,000	Over 23,500
2	3,301 - 25,000	3,101 - 23,500
3	750 - 3,300	700 - 3,100
4	Less than 750	Less than 700

* Tier 0 consists of financial institutions that meet both of the following criteria:
1. Less than 10 percent of their Reserve Bank forward receipt volume was deposited with the Reserve Banks by Premium Daily Fee depositors during the sample period, and
2. Their average daily Reserve Bank forward receipt volume exceeded 150 items per day during the sample period.
Tier 0 is intended to be a transitional tier: Once a financial institution is assigned to tier 1 -4 or the substitute check tier, it cannot be assigned to tier 0.

Table 10

FedReturn Standard Deposit Tier Volume Thresholds		
<i>Applicable to Standard ICL deposit option</i>		
TIER	2018 AVERAGE DAILY RETURN RECEIPT VOLUME ITEMS/DAY	2019 AVERAGE DAILY RETURN RECEIPT VOLUME ITEMS/DAY
1	Over 3,000	Over 2,820
2	1,001 - 3,000	941 - 2,820
3	100 - 1,000	94 - 940
4	Less than 100	Less than 94

Table 11

FedReturn Premium Daily Deposit Option Tier Volume Thresholds		
<i>Applicable to Premium Daily Fee A deposit option</i>		

TIER	2018 AVERAGE DAILY RETURN RECEIPT VOLUME ITEMS/DAY	2019 AVERAGE DAILY RETURN RECEIPT VOLUME ITEMS/DAY
0	* See explanation below	* See explanation below
1	Over 1,500	Over 1,410
2	501 - 1,500	471 - 1,410
3	100 - 500	94 - 470
4	Less than 100	Less than 94

** Tier 0 consists of financial institutions with less than 10 percent of their Reserve Bank return receipt volume deposited with the Reserve Banks by Premium Daily Fee depositors during the sample period.
Tier 0 is intended to be a transitional tier; once a financial institution is assigned to tier 1-4 or the substitute check tier, it cannot be assigned to tier 0.*

The Reserve Banks will increase cash letter fees by \$0.50 for all deadlines on the FedForward Standard, Deferred, Dollar-Culled, and Endpoint-Culled image cash letters and FedReturn Standard image cash letters. The Reserve Banks will also increase the FedReceipt Premium Delivery 8:00 a.m. EST target per-item fee by \$0.006 and the Premium Delivery 10:00 a.m. target and 12:00 noon target per-item fees by \$0.002.²⁸ Further, the Reserve Banks will increase FedReceipt Electronic Reject Repair fees by \$0.05, increasing the Basic repair fee from \$0.15 per item to \$0.20 per item and increasing the Premium repair fee from \$0.25 per item to \$0.30 per item. Together, these changes are intended to facilitate longer-term cost recovery for the check service by increasing the proportion of fixed revenue while still providing price stability for customers in light of the anticipated continued decline in check volumes.

²⁸ The 8:00 a.m. delivery target is expressed in eastern time, while the 10:00 a.m. and 12:00 noon targets are local time.

The Reserve Banks will continue increasing fees to encourage depositors to shift volume away from legacy paper-related products in light of today's electronic check-processing environment. Specifically, the Reserve Banks will increase all fees for the FedImage product and certain truncation fees by approximately 10.0 percent.²⁹ Table 12 shows the 2019 FedImage and Electronic Check Services fees.

Table 12

FedImage and Electronic Check Services and Fees		
IMAGE ARCHIVE	FIXED FEE	PER ITEM FEE
Image Capture + 7 business day archive	\$6.00	\$0.0090
Image Capture On-Us Surcharge	-	\$0.0212
30 business day archive	-	\$0.0011
60 business day archive	-	\$0.0013
7-year archive / 11-year archive	-	\$0.0020
Dual archive (Transition period up to 120 days)	-	\$0.0012
Extended dual archive (More than 120 days)	-	\$0.0121
Back File Conversion	\$4.25	\$0.0121
Electronic On-Us Service	\$4.25	\$0.0121
<i>Extended RAID Storage</i>		
61 days to 6 months	-	\$0.0010
61 days to 12 months	-	\$0.0024
61 days to 24 months	-	\$0.0061
IMAGE RETRIEVALS		
Retrievals to view via FedLine Web [®] inquiry	-	\$0.4300
<i>Retrievals to email via FedLine Web</i>		
Request via FedLine Web inquiry	-	\$0.4300
Recurring request	-	\$0.4300
Image Access and Retrievals through a Gateway	-	\$0.4300
Subscription Retrievals	-	\$0.0026
Manual FedImage Requests (requests performed by FRB staff)	-	\$7.2500
IMAGE DELIVERY		
<i>Physical Media</i>		
CD-ROM Select Accounts Service - RAID	\$18.15/CD-ROM	\$0.0190

²⁹ Because of rounding, the individual price increases range from 8.3 percent to 12.5 percent.

CD-ROM – Tape	\$18.15/CD-ROM	\$0.1200
TRUNCATION		
Image Enhanced Truncation	\$6.60	\$0.0110
Return Item Retrieval - Fedline	-	\$1.2700

Finally, the Reserve Banks will introduce two new fees as incentives to financial institutions to reduce errors in adjustment case submissions. The Reserve Banks will introduce a \$0.50 fee for encoding error and duplicate payment adjustment cases caused by the depository bank's incorrect encoding or duplicate deposit of an item. The Reserve Banks will also introduce a \$2.50 fee for automated adjustment case types that require manual intervention by Reserve Bank staff because of error on the part of the adjusting bank.³⁰ These new fees are intended to help drive efficiencies throughout the industry's check collection process by providing an incentive to financial institutions to improve the quality of their check deposit processing. In addition, the \$2.50 fee will cover the staffing costs associated with manually handling cases that should have been automatically resolved. Table 13 shows the 2019 fees under Quality Improvement Initiatives for Electronic Check Collection.

Quality Improvement Initiatives

³⁰ This fee is charged to a financial institution that provides incorrect or incomplete information when opening an adjustment case with the Reserve Banks. The fee is only applicable to adjustment cases that would have resolved automatically had the case been submitted correctly (investigation types ENC, PAID, NCH, DISP, SOR and LNE).

PRODUCT	PER CASE/ITEM FEE
Check Adjustments - Deposit Quality Issues	\$0.50
Check Adjustments - Incorrect/Incomplete Case Opening	\$2.50
Return Deposit Exceptions - Items Qualified to the Federal Reserve as BOFD ³¹	\$15.00

Table 13

The Reserve Banks estimate that the announced price changes will result in a 4.0 percent average price increase for check customers.

The primary risks to the Reserve Banks' ability to achieve budgeted 2019 cost recovery for the check service include greater-than-expected declines in check volume due to the general reduction in check writing and increased competition from correspondent banks, aggregators, and direct exchanges, which would result in lower-than-anticipated revenue.

D. FedACH Service — Table 14 shows the 2017 actual, 2018 estimate, and 2019 budgeted cost-recovery performance for the commercial FedACH service.

Table 14 FedACH Service Pro Forma Cost and Revenue Performance (dollars in millions)					
YEAR	1 REVENUE	2 TOTAL EXPENSE	3 NET INCOME (ROE) [1-2]	4 TARGETED ROE	5 RECOVERY RATE AFTER TARGETED ROE [1/(2+4)]
2017 (actual)	141.3	140.0	1.3	1.6	99.8%
2018 (estimate)	149.2	150.4	-1.2	1.9	98.0%

³¹ This existing fee was previously located in the FedReturn section of the Electronic Check Collection Fee.

2019 (budget)	152.0	147.4	4.6	1.9	101.8%
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1. *2018 Estimate*— The Reserve Banks estimate that the FedACH service will recover 98.0 percent of total expenses and targeted ROE, compared with a 2018 budgeted recovery rate of 96.1 percent. Through August, FedACH commercial origination and receipt volume was 7.5 percent higher than it was during the same period last year. For full-year 2018, the Reserve Banks estimate that FedACH commercial origination and receipt volume will increase 6.1 percent from 2017 levels, in line with the budgeted increase of 5.2 percent. However, investment costs associated with the multiyear technology initiative to modernize the FedACH processing platform are driving the overall under recovery rate.

2. *2019 Pricing*— The Reserve Banks expect the FedACH service to recover 101.8 percent of total expenses and targeted ROE in 2019. FedACH commercial origination and receipt volume is projected to grow 3.3 percent, which, combined with anticipated incremental revenue from new services, is expected to contribute to an increase of \$2.8 million in total revenue from the 2018 estimate. Total expenses are projected to decrease \$3.0 million from 2018 expenses, primarily because of the reduction in costs associated with the development and expected completion in 2019 of the new FedACH technology platform.

The Reserve Banks will introduce a new Exception Resolution Service that provides an automated means for participants to manage ACH exceptions for entries settled through FedACH.³² The Reserve Banks expect that automation of exception cases will improve efficiency of FedACH payments by streamlining existing time-consuming manual processes that banks use to manage exception cases. The Service is optional; customers will be able to originate an exception case directly through FedLine, through a third-party agent on their behalf, or through a Federal Reserve Bank on their behalf.

The Reserve Banks will not change fees for existing FedACH priced services.

The primary risks to the Reserve Banks' ability to achieve budgeted 2019 cost recovery for the FedACH service are unanticipated cost overruns associated with the FedACH technology modernization project and unanticipated volume reductions.

³² Specifically, the service is designed to handle disputes, notifications, questions, or requests for additional information from a financial institution either for their own use or on behalf of their account holder. Eight of the most common exception requests between financial institutions will be able to be managed through the service initially: (1) written statement of unauthorized debit copy, (2) converted check copy, (3) ODFI request for return, (4) RDFI request for late return acceptance, (5) request for proof of debit authorization, (6) originator contact information, (7) payment trace request, and (8) general inquiries (used to contact another institution for information exchange).

The ERS product will not be available to customers on January 2nd, 2019. The Reserve Banks will provide notice to customers, regarding the availability of the product, once an implementation date has been determined.

E. *Fedwire Funds and National Settlement Services* — Table 15 shows the 2017 actual, 2018 estimate, and 2019 budgeted cost-recovery performance for the Fedwire Funds and National Settlement Services.

Table 15

Fedwire Funds and National Settlement Services Pro Forma Cost and Revenue Performance (dollars in millions)					
YEAR	1 REVENUE	2 TOTAL EXPENSE	3 NET INCOME (ROE) [1-2]	4 TARGETED ROE	5 RECOVERY RATE AFTER TARGETED ROE [1/(2+4)]
2017 (actual)	129.7	120.8	8.9	1.3	106.2%
2018 (estimate)	132.2	124.4	7.8	1.5	105.0%
2019 (budget)	133.6	131.1	2.5	1.6	100.7%

1. *2018 Estimate* — The Reserve Banks estimate that the Fedwire Funds and National Settlement Services will recover 105.0 percent of total expenses and targeted ROE, compared with a 2018 budgeted recovery rate of 103.9 percent. Through August, Fedwire Funds Service online volume was 5.1 percent higher than it was during the same period last year. For full-year 2018, the Reserve Banks estimate that Fedwire Funds Services online volume will increase 3.2 percent from 2017 levels, compared with the 0.8 percent volume decrease that had been budgeted. Through August, the National Settlement Service (NSS) settlement file volume was 3.6 percent higher than it was during the same period last year, and settlement entry volume was 1.1 percent higher. For the full year, the Reserve Banks estimate that settlement file volume will increase 1.5 percent (in line with a

budgeted increase of 1.3 percent) and settlement entry volume will decrease 2.3 percent from 2017 levels (compared with a budgeted 0.7 percent increase).

2. 2019 Pricing — The Reserve Banks expect the Fedwire Funds and National Settlement Services to recover 100.7 percent of total expenses and targeted ROE. Revenue is projected to be \$133.6 million, an increase of 1.1 percent from the 2018 estimate. The Reserve Banks project total expenses to be roughly \$6.7 million higher than 2018 expenses, primarily reflecting investments in new initiatives to improve resiliency and operational functionality.

The Reserve Banks will increase the offline send surcharge and offline receive surcharge for the Fedwire Funds Service from \$60.00 to \$65.00 in order to offset project costs related to the automation of Office of Foreign Asset Control (OFAC) screening within the offline process. The Reserve Banks estimate that the price changes, along with an expected increase in incentive discount-eligible volume, will ultimately result in an overall 2.0 percent average price increase for Fedwire Funds customers.

The Reserve Banks will not change NSS fees for 2019.

The primary risk to the Reserve Banks' ability to achieve budgeted 2019 cost recovery for these services is an overrun in costs from new initiatives to

improve resiliency and operational functionality. Unanticipated decreases in volume may also negatively impact cost recovery.

F. *Fedwire Securities Service* — Table 16 shows the 2017 actual, 2018 estimate, and 2019 budgeted cost-recovery performance for the Fedwire Securities Service.³³

Table 16

Fedwire Securities Service Pro Forma Cost and Revenue Performance (dollars in millions)					
YEAR	1 REVENUE	2 TOTAL EXPENSE	3 NET INCOME (ROE) [1-2]	4 TARGETED ROE	5 RECOVERY RATE AFTER TARGETED ROE [1/(2+4)]
2017 (actual)	28.6	27.3	1.3	0.3	103.6%
2018 (estimate)	27.1	27.7	-0.7	0.3	96.5%
2019 (budget)	26.4	27.5	-1.1	0.3	94.7%

1. *2018 Estimate* — The Reserve Banks estimate that the Fedwire Securities Service will recover 96.5 percent of total expenses and targeted ROE, compared with a 2018 budgeted recovery rate of 97.6 percent. The Reserve Banks estimate revenue to be \$27.1 million, a decrease of 5.3 percent from the 2018 budget. Total expenses are projected to be \$27.7 million for full-year 2018, an increase of 1.7 percent from the 2018 budget.

³³ The Reserve Banks provide transfer services for securities issued by the U.S. Treasury, federal government agencies, government-sponsored enterprises, and certain international institutions. The priced component of this service, reflected in this memorandum, consists of revenues, expenses, and volumes associated with the transfer of all non-Treasury securities. For Treasury securities, the U.S. Treasury assesses fees for the securities transfer component of the service. The Reserve Banks assess a fee for the funds settlement component of a Treasury securities transfer; this component is not treated as a priced service.

Through August, Fedwire Securities Service online agency transfer volume was 2.3 percent lower than it was during the same period last year. For full-year 2018, the Reserve Banks estimate that Fedwire Securities Service online agency transfer volume will decline 4.8 percent from 2017 levels, compared with a budgeted decline of 15.4 percent. This decrease in online agency transfer volume primarily reflects two market trends. First, a continuation of interest rate increases in 2018 has led to a decrease in mortgage refinance volume and issuance, which in turn has led to a decrease in settlement activity for agency mortgage-backed securities over Fedwire Securities. Second, JP Morgan Chase (JPMC) has recently completed its exit from the broker-dealer services business, resulting in Bank of New York Mellon generally serving as the sole clearing bank for government securities. As a result of this market shift, online agency transfer volume is expected to decrease through year-end 2018. These structural changes within the government securities clearing and settlement market are expected to continue to affect online transfer volumes through 2019.

For full-year 2018, volumes for the Fedwire Securities' two largest revenue-generating services – account maintenance and issue maintenance – are expected to decline from 2017 levels. Through August, account maintenance volume was 5.3 percent lower than it was during the same

period last year. For full-year 2018, the Reserve Banks estimate that account maintenance volume will decline 5.0 percent from 2017 levels, compared with a budgeted decline of 3.2 percent. The higher-than-expected account maintenance volume decline is largely the result of joint custody account closures. Through August, the number of agency issues maintained was 3.9 percent lower than it was during the same period last year. For full-year 2018, the Reserve Banks estimate that the number of agency issues maintained will decline 4.7 percent from 2017 levels, compared with a budgeted decline of 1.4 percent.

2. 2019 Pricing — The Reserve Banks expect the Fedwire Securities Service to recover 94.7 percent of total expenses and targeted ROE in 2019. Revenue is projected to be \$26.4 million, a decrease of 2.6 percent from the 2018 estimate. The Reserve Banks also project that 2019 expenses will remain relatively flat, decreasing by \$0.2 million from the 2018 estimate. Significant drivers of 2019 operating costs include investments to advance new initiatives to improve resiliency and operational functionality.

As JPMC finalizes its reallocation of holdings and ongoing market changes reach steady state, the Reserve Banks project that online agency transfer volume will remain relatively flat, with a slight increase of 0.8 percent in 2019. Additionally, the volume of accounts maintained will likely

decrease 5.6 percent, and the volume of agency issues maintained will likely decrease 15.5 percent.³⁴ Account maintenance volume is expected to continue to decline in 2019 because of ongoing joint custody account closures driven by state-level collateral program changes. Issue maintenance volume is expected to decline because of cost allocation adjustments necessitated by the completion of the Fedwire Modernization Program, and new securities related to the Federal Home Loan Mortgage Corporation's securities exchange program in advance of the Federal Housing Finance Agency's Single Security Initiative.

The Reserve Banks will increase the online agency transfer fee from \$0.77 to \$0.98. Processing costs for online agency transfers and online Treasury transfers are nearly identical, yet the corresponding fees are different; therefore, the fee change is intended to bring the two fees into better alignment.³⁵ Additionally, the Reserve Banks will increase the automated claims adjustment processing fee from \$0.80 to \$1.00. This fee increase will offset costs associated with the automated claims adjustment processing expansion project, which is scheduled to go live at year-end 2019. The

³⁴ The online transfer fee, monthly account maintenance fee, and monthly issue maintenance fee accounted for more than 94 percent of total Fedwire Securities Service revenue through August 2018.

³⁵ Treasury online transfer fees are set by and remitted to the U.S. Department of the Treasury, except for a funds movement fee of \$0.11, which is set and retained by the Federal Reserve Banks for their direct, support, and overhead costs of settling on their books the payment associated with the transfer of a Treasury security between securities accounts.

Reserve Banks estimate that the combined price changes will result in a 6.0 percent average price increase for Fedwire Securities customers.

The primary risks to the Reserve Banks' ability to achieve budgeted 2019 cost recovery for these services are lower-than-expected volume resulting from the pace of structural changes in government securities clearing and settlement, and higher-than-expected costs from new initiatives to improve resiliency and operational functionality.

G. FedLine Access — The Reserve Banks charge fees for the electronic connections that depository institutions use to access priced services and allocate the costs and revenue associated with this electronic access to the various priced services. There are currently six FedLine channels through which customers can access the Reserve Banks' priced services: FedMail, FedLine Exchange, FedLine Web, FedLine Advantage, FedLine Command, and FedLine Direct.³⁶ The Reserve Banks bundle these channels into eleven FedLine packages, described below, that are supplemented by a number of premium (or à la carte) access and accounting information options. In addition, the Reserve Banks offer FedComplete packages, which are bundled

³⁶ FedMail, FedLine Exchange, FedLine Web, FedLine Advantage, FedLine Command, and FedLine Direct are registered trademarks of the Federal Reserve Banks.

offerings of FedLine connections and a fixed number of FedACH, Fedwire Funds, and Check 21-enabled transactions.

Eight attended access packages offer manual access to critical payment and information services via a web-based interface. The FedMail package provides access to basic information services via email, while the two FedLine Exchange packages are designed to provide certain services, such as the E-Payments Routing Directory, to customers that otherwise do not use FedLine for any payment services. The two FedLine Web packages offer online attended access to a range of services, including cash services, FedACH information services, and Check services. Three FedLine Advantage packages expand upon the FedLine Web packages and offer attended access to critical transactional services: FedACH, Fedwire Funds, and Fedwire Securities.

Three unattended access packages are computer-to-computer, IP-based interfaces. The FedLine Command package offers an unattended connection to FedACH as well as to most accounting information services. The two remaining options are FedLine Direct packages, which allow for unattended connections at one of two connection speeds to FedACH, Fedwire Funds,

and Fedwire Securities transactional and information services and to most accounting information services.³⁷

In 2019, the Reserve Banks will offer upgraded FedLine Direct Plus and FedLine Direct Premier packages, at monthly fees of \$5,500 and \$10,500 respectively, in order to reflect improved network resiliency, efficiency in supporting all payments traffic, and availability of higher network speeds.³⁸ Historically, the Reserve Banks' FedLine Direct connections were not able to support all payment traffic including Check Services because of limitations in network speed and ability to manage bandwidth.

The Reserve Banks will also increase the monthly fee for the current (legacy) FedLine Direct Plus solution by \$350, from \$3,650 to \$4,000. Existing customers can use the current (legacy) FedLine Plus and Premier solutions and Check 21 Large File Delivery but will eventually need to convert to the enhanced FedLine Direct Solutions. Existing users should expect the legacy solutions to be retired and plan migration efforts to the new service packages beginning in late 2018. The Reserve Banks will also

³⁷ The Reserve Banks offer an unattended check product, Check 21 Large File Delivery, that allows a depository institution to upload and download check image cash letters automatically via a direct network connection to the Reserve Banks.

³⁸ As of July 16, 2018, 256K and T1 line speed connections are no longer offered to new customers as part of the FedLine Direct Plus and FedLine Direct Premier packages.

increase the à la carte Network Diversity monthly fee by \$500, from \$2,000 to \$2,500.³⁹

Table 17 provides a summary of the attributes and 2019 pricing for legacy and upgraded FedLine Direct packages:

Table 17

FedLine Direct Packages		
FEDLINE DIRECT PLUS	LEGACY⁴⁰	2019⁴¹
Connection Speed	256 Kbps	2 Mbps
Dual Vendors	N/A	Included
Check 21 Services	Available à la carte	Included
Server Certificates	Two included	Included
Network Diversity	None included	None included
Contingency Solution	Available à la carte	Included
Additional WANs	None included	None included
VPNs	One included	One included
Bundled FedLine Channels	Web, Advantage, Command	Web, Advantage, Command
Price	\$4,000.00	\$5,500.00
FEDLINE DIRECT PREMIER		
Connection Speed	1.5 Mbps	2 Mbps
Dual Vendors	N/A	Included
Check 21 Services	Available à la carte	Included
Server Certificates	Two included	Included
Network Diversity	None included	One included
Contingency Solution	Available à la carte	Included
Additional WANs	None included	One included
VPNs	Two included	Two included
Bundled FedLine Channels	Web, Advantage, Command	Web, Advantage, Command
Price	\$6,800.00	\$10,500.00

In addition, the Reserve Banks will eliminate specific à la carte fees and services for current FedLine packages. The Reserve Banks will discontinue offering FedLine Command server certificates as a separate monthly fee.

³⁹ Network Diversity refers to a method for improving the resiliency of a computing network by using two or more telecommunication paths with different characteristics so that the first remains unaffected by events interrupting traffic on the second and vice versa.

⁴⁰ Available only to existing customers prior to 2019

⁴¹ Available to new and existing customers starting 2019

FedLine Command server certificates will be included in FedLine Command packages for no additional cost. Including these certificates in FedLine Command packages is similar to current practices for upgraded FedLine Direct packages and will result in a consistent customer experience across both product lines. The Reserve Banks will also discontinue offering the Accounting Totals by Service (ACTS) report as an Accounting Service option for customers, because of low usage. In addition, the Reserve Banks will discontinue offering new FedMail Fax subscriptions to customers, in order to encourage them to move to more modern and secure technology that meets industry standards and enhances their experience.

The Reserve Banks estimate that the price changes will result in a 7.5 percent average price increase for FedLine customers. This increase is primarily driven by the changes to FedLine Direct Plus and Premier packages that provide enhanced network options.

II. ANALYSIS OF COMPETITIVE EFFECT

All operational and legal changes considered by the Board that have a substantial effect on payment system participants are subject to the competitive impact analysis described in the March 1990 policy “The

Federal Reserve in the Payments System.”⁴² Under this policy, the Board assesses whether proposed changes would have a direct and material adverse effect on the ability of other service providers to compete effectively with the Federal Reserve in providing similar services because of differing legal powers or constraints or because of a dominant market position deriving from such legal differences. If any proposed changes create such an effect, the Board must further evaluate the changes to assess whether the benefits associated with the changes —such as contributions to payment system efficiency, payment system integrity, or other Board objectives— can be achieved while minimizing the adverse effect on competition.

The 2019 fees, fee structures, and changes in service will not have a direct and material adverse effect on the ability of other service providers to compete effectively with the Reserve Banks in providing similar services. The changes should permit the Reserve Banks to earn a ROE that is comparable to overall market returns and provide for full cost recovery over the long run.

⁴² Federal Reserve Regulatory Service (FRRS) 9-1558.

III. 2019 Fee Schedules

FEDACH SERVICE 2019 FEE SCHEDULE

EFFECTIVE JANUARY 2, 2019.

BOLD INDICATES CHANGES FROM 2018 PRICES

	Fee
FedACH minimum monthly fee	
Originating Depository Financial Institution (ODFI) ⁴³	\$50.00
Receiving Depository Financial Institution (RDFI) ⁴⁴	\$40.00
Origination (per item or record)	
Forward or return items	\$0.0035
SameDay Service - forward item ⁴⁵	\$0.0010 surcharge
Addenda record	\$0.0015
FedLine Web-originated returns and notification of change (NOC) ⁴⁶	\$0.35
Facsimile Exception Return/NOC ⁴⁷	\$45.00
SameDay Exception Return	\$45.00
Automated NOC	\$0.20
Volume-based discounts (based on monthly billed origination volume) ⁴⁸ per item when origination volume is:	
750,001 to 1,500,000 items per month	\$0.0008 discount
more than 1,500,000 items per month	\$0.0010 discount
Volume-based discounts (based on monthly billed receipt volume) ⁴⁹ per item when receipt volume is:	
10,000,001 to 15,000,000 items per month	\$0.0002 discount
more than 15,000,000 items per month	\$0.0003 discount
Receipt (per item or record)	
Forward Item	\$0.0035

⁴³ Any ODFI incurring less than \$50 for the following fees will be charged a variable amount to reach the minimum: Forward value and non-value item origination fees, and FedGlobal ACH origination surcharges.

⁴⁴ Any RDFI not originating forward value and non-value items and incurring less than \$40 in receipt fees will be charged a variable amount to reach the minimum. Any RDFI that originates forward value and nonvalue items incurring less than \$50 in forward value and nonvalue item origination fees will only be charged a variable amount to reach the minimum monthly origination fee.

⁴⁵ This surcharge is assessed on all forward items that qualify for same-day processing and settlement and is incremental to the standard origination item fee.

⁴⁶ The fee includes the item and addenda fees in addition to the conversion fee.

⁴⁷ The fee includes the item and addenda fees in addition to the conversion fee. Reserve Banks also assess a \$45 fee for every government paper return/NOC they process.

⁴⁸ Origination volumes at these levels qualify for a waterfall discount which includes all FedACH origination items.

⁴⁹ Origination discounts based on monthly billed receipt volume apply only to those items received by FedACH receiving points and are available only to Premium Receivers.

Return Item	\$0.0075
Addenda record	\$0.0015
Volume-based discounts	
Non-Premium Receivers ⁵⁰ per item when volume is:	
750,001 to 12,500,000 items per month ⁵¹	\$0.0017 discount
more than 12,500,000 items per month ⁵²	\$0.0019 discount
Premium Receivers, Level One ⁵³ per item when volume is:	
750,001 to 1,500,000 items per month ⁵¹	\$0.0017 discount
1,500,001 to 2,500,000 items per month ⁵²	\$0.0017 discount
2,500,001 to 12,500,000 items per month ⁵²	\$0.0018 discount
more than 12,500,000 items per month ⁵²	\$0.0020 discount
Premium Receivers, Level Two ⁵⁴ per item when volume is	
750,001 to 1,500,000 items per month ⁵¹	\$0.0017 discount
1,500,001 to 2,500,000 items per month ⁵²	\$0.0017 discount
2,500,001 to 12,500,000 items per month ⁵²	\$0.0019 discount
more than 12,500,000 items per month ⁵²	\$0.0021 discount
FedACH Bundled Package Pricing Discount	
Monthly Bundled Service Package Discount ⁵⁵	\$20.00 discount

Monthly FedACH Risk[®] Management fees⁵⁶

⁵⁰ RDFIs receiving through FedACH less than 90 percent of their FedACH-originated items.

⁵¹ This per-item discount is a reduction to the standard receipt fees listed in this fee schedule.

⁵² Receipt volumes at these levels qualify for a waterfall discount which includes all FedACH receipt items.

⁵³ RDFIs receiving through FedACH at least 90 percent of their FedACH-originated items, but less than 90 percent of all of their ACH items originated through any operator.

⁵⁴ RDFIs receiving through FedACH at least 90 percent of all of their ACH items originated through any operator.

⁵⁵ To qualify for the discount, a financial institution must meet all of the following criteria in a given month: (1) be charged the minimum monthly fee - forward origination (57208); (2) subscribe to FedLine Web Plus or any higher FedLine[®] access solution; and (3) subscribe to the FedPayments Reporter service, the FedACH RDFI Alert service, or the FedACH Risk Origination Monitoring service.

For up to 5 criteria sets	\$35.00
For 6 through 11 criteria sets	\$70.00
For 12 through 23 criteria sets	\$125.00
For 24 through 47 criteria sets	\$150.00
For 48 through 95 criteria sets	\$250.00
For 96 through 191 criteria sets	\$425.00
For 192 through 383 criteria sets	\$675.00
For 384 through 584 criteria sets	\$850.00
For more than 584 criteria sets	\$1,100.00
Risk origination monitoring batch (based on total monthly volume)	
For 1 through 100,000 batches (per batch)	\$0.007
For more than 100,000 batches (per batch)	\$0.0035

Monthly FedPayments® Reporter Service

FedPayments Reporter Service package pricing includes

ACH Received Entries Detail – Customer and Depository Financial Institution

ACH Return Reason Report – Customer and Depository Financial Institution

ACH Volume Summary by SEC Code – Customer

Customer Transaction Activity

Death Notification

International (IAT)

Notification of Change

Payment Data Information File

Remittance Advice Detail

Remittance Advice Summary

Return Item

Return Ratio

Social Security Beneficiary

Originator Setup

Report Delivery via FedLine Access Solution

On Demand Surcharge \$1.00

Report delivery via FedLine file access solution (monthly fee)

For up to 50 reports \$40.00

For 51 through 150 reports \$60.00

For 151 through 500 reports \$110.00

For 501 through 1,000 reports \$200.00

For 1,001 through 1,500 reports \$285.00

For 1,501 through 2,500 reports \$460.00

For 2,501 through 3,500 reports \$640.00

For 3,501 through 4,500 reports \$820.00

⁵⁶ Criteria may be set for both the Origination Monitoring Service and the RDFI Alert Service. Subscribers with no criteria set up will be assessed the \$35 monthly package fee.

For 4,501 through 5,500 reports	\$995.00
For 5,501 through 7,000 reports	\$1,225.00
For 7,001 through 8,500 reports	\$1,440.00
For 8,501 through 10,000 reports	\$1,650.00
For more than 10,000 reports	\$1,800.00
Premier reports (per report generated) ⁵⁷	
ACH Volume Summary by SEC Code Report - Depository Financial Institution	
For 1 through 5 reports	\$10.00
For 6 through 10 reports	\$6.00
For 11 or more reports	\$1.00
On Demand Surcharge	\$1.00
ACH Routing Number Activity Report	
For 1 through 5 reports	\$10.00
For 6 through 10 reports	\$6.00
For 11 or more reports	\$1.00
On Demand Surcharge	\$1.00
ACH Originated Batch Report (monthly)	
For 1 through 5 reports	\$10.00
For 6 through 10 reports	\$6.00
For 11 or more reports	\$1.00
On Demand Surcharge	\$1.00
ACH Originated Batch Report (daily)	
Scheduled Report	\$0.65
On Demand Surcharge	\$1.00
On-us inclusion	
Participation (monthly fee per RTN)	\$10.00
Per-item	\$0.0030
Per-addenda	\$0.0015
Report delivery via encrypted email (per email)	\$0.20
Other Fees and Discounts	
Monthly fee (per RTN)	
FedACH Participation Fee ⁵⁸	\$65.00
SameDay Service Origination Participation Fee ⁵⁹	\$10.00
FedACH Settlement Fee ⁶⁰	\$55.00
FedACH Information File Extract Fee	\$150.00

⁵⁷ Premier reports generated on demand are subject to the package/tiered fees plus a surcharge.

⁵⁸ The fee applies to RTNs that have received or originated FedACH transactions during a month. Institutions that receive only U.S. government transactions or that elect to use a private sector operator exclusively are not assessed the fee.

⁵⁹ This surcharge is assessed to any RTN that originates at least one item meeting the criteria for same-day processing and settlement in a given month.

⁶⁰ The fee is applied to any RTN with activity during a month, including RTNs of institutions that elect to use a private-sector operator exclusively but also have items routed to or from customers that access the ACH network through FedACH. This fee does not apply to RTNs that use the Reserve Banks for only U.S. government transactions.

IAT Output File Sort Fee	\$75.00
Fixed Participation Fee - Automated NOCs ⁶¹	\$5.00
Non-Electronic Input/Output fee ⁶²	
CD/DVD (CD or DVD)	\$50.00
Paper (file or report)	\$50.00
Fees and Credits Established by NACHA ⁶³	
NACHA Same Day Entry fee (per item)	\$0.052
NACHA Same Day Entry credit (per item)	\$0.052 (credit)
NACHA Unauthorized Entry fee (per item)	\$4.50
NACHA Unauthorized Entry credit (per item)	\$4.50 (credit)
NACHA Admin Network fee (monthly fee per RTN)	\$22.00
NACHA Admin Network fee (per entry)	\$0.000185
FedGlobal® ACH Payments ⁶⁴	
Fixed Monthly Fee (per RTN) ⁶⁵	
Monthly origination volume more than 500 items	\$185.00
Monthly origination volume between 161 and 500 items	\$60.00
Monthly origination volume less than 161 items	\$20.00
Per-item Origination Fee for Monthly Volume more than 500 Items (surcharge) ⁶⁶	
Canada service	\$0.50
Mexico service	\$0.55
Panama service	\$0.60
Europe service	\$1.13
Per-item Origination Fee for Monthly Volume between 161 and 500 items (surcharge) ⁶⁶	
Canada service	\$0.75
Mexico service	\$0.80
Panama service	\$0.85
Europe service	\$1.38
Per-item Origination Fee for Monthly Volume Less than 161 items (surcharge) ⁶⁶	
Canada service	\$1.00
Mexico service	\$1.05
Panama service	\$1.10
Europe service	\$1.63

⁶¹ Fee will be assessed only when automated NOCs are generated.

⁶² Limited services are offered in contingency situations.

⁶³ The fees and credits listed are collected from the ODFI and credited to NACHA (admin network) or to the RDFI (same-day entry and unauthorized entry) in accordance with the *ACH Rules*.

⁶⁴ The international fees and surcharges vary from country to country as these are negotiated with each international gateway operator.

⁶⁵ A single monthly fee based on total FedGlobal ACH Payments origination volume.

⁶⁶ This per-item surcharge is in addition to the standard domestic origination fees listed in this fee schedule.

Other FedGlobal ACH Payments Fees	
Canada service	
Return received from Canada ⁶⁷	\$0.99 (surcharge)
Trace of item at receiving gateway	\$5.50
Trace of item not at receiving gateway	\$7.00
Mexico service	
Return received from Mexico ⁶⁷	\$0.91 (surcharge)
Item trace	\$13.50
Foreign currency to foreign currency (F3X) item originated to Mexico ⁶⁶	\$0.67 (surcharge)
Panama service	
Return received from Panama ⁶⁷	\$1.00 (surcharge)
Item trace	\$7.00
NOC	\$0.72
Europe service	
F3X item originated to Europe ⁶⁶	\$1.25 (surcharge)
Return received from Europe ⁶⁷	\$1.35 (surcharge)
Item trace	\$7.00
Exception Resolution Service⁶⁸	
Fixed Fee per RTN⁶⁹	
Self-Managed Cases	\$10.00
Agent-Managed Cases	\$10.00
Federal Reserve Bank-Managed Cases	\$60.00
Federal Reserve Bank-Managed Cases	
Case Open Fee	\$5.00
Case Response Fee	\$5.00
Variable Case Open Fees (applies to self-managed and agent-managed cases only at the parent RTN)⁷⁰	
1 – 50 cases	\$1.25
51 – 100 cases	\$1.00
101 – 500 cases	\$0.75
501 – 1,000 cases	\$0.50
1,001 – 5,000 cases	\$0.25
5,001 – 10,000 cases	\$0.20
10,001 – 99,999,999 cases	\$0.10

⁶⁷ This per-item surcharge is in addition to the standard domestic receipt fees listed in this fee schedule.

⁶⁸ The associated fees are effective upon availability of the product.

⁶⁹ A customer that opens at least 1,000 cases in a given month will receive a 50% discount on the fixed fee for that month.

⁷⁰ The per case fees are rolled up to the parent RTN, such that a customer that opens a total of 100 cases per month under two separate RTNs would pay a total of \$112.50 (\$1.25 for the first 50 cases and \$1.00 for the next 50 cases) in addition to the fixed fees.

FEDWIRE FUNDS AND NATIONAL SETTLEMENT SERVICES 2019 FEE SCHEDULE

EFFECTIVE JANUARY 2, 2019.
BOLD INDICATES CHANGES FROM 2018 PRICES.

Fedwire Funds Service

	Fee
Monthly Participation Fee	\$95.00
Basic volume-based pre-incentive transfer fee (originations and receipts) – per transfer for the first 14,000 transfers per month	\$0.820
additional transfers up to 90,000 per month	\$0.245
every transfer over 90,000 per month	\$0.160
Volume-based transfer fee with the incentive discount (originations and receipts) – per eligible transfer for ⁷¹	
the first 14,000 transfers per month	\$0.164
additional transfers up to 90,000 per month	\$0.049
every transfer over 90,000 per month	\$0.032
Surcharge for Offline Transfers (Originations and Receipts)	\$65.00
Surcharge for End-of-Day Transfer Originations ⁷²	\$0.26
Monthly FedPayments Manager import/export fee ⁷³	\$50.00
Surcharge for high-value payments:	
> \$10 million	\$0.14
> \$100 million	\$0.36

⁷¹ The incentive discounts apply to the volume that exceeds 60 percent of a customer's historic benchmark volume. Historic benchmark volume is based on a customer's average daily activity over the previous five calendar years. If a customer has fewer than five full calendar years of previous activity, its historic benchmark volume is based on its daily activity for as many full calendar years of data as are available. If a customer has less than one year of past activity, then the customer qualifies automatically for incentive discounts for the year. The applicable incentive discounts are as follows: \$0.656 for transfers up to 14,000, \$0.196 for transfers 14,001 to 90,000, and \$0.128 for transfers over 90,000.

⁷² This surcharge applies to originators of transfers that are processed by the Reserve Banks after 5:00 p.m. eastern time.

⁷³ This fee is charged to any Fedwire Funds participant that originates a transfer message via the FedPayments Manager Funds tool and has the import/export processing option setting active at any point during the month.

Surcharge for Payment Notification:	
Origination Surcharge ⁷⁴	\$0.01
Receipt Volume ^{74, 75}	N/A
Delivery of Reports – Hard Copy Reports to On-Line Customers	\$50.00
Special Settlement Arrangements (charge per settlement day) ⁷⁶	\$150.00
National Settlement Service	
Basic	
Settlement Entry Fee	\$1.50
Settlement File Fee	\$30.00
Surcharge for Offline File Origination ⁷⁷	\$45.00
Minimum Monthly Fee ⁷⁸	\$60.00

⁷⁴ Payment Notification and End-of-Day Origination surcharges apply to each Fedwire funds transfer message.

⁷⁵ Provided on billing statement for informational purposes only.

⁷⁶ This charge is assessed to settlement arrangements that use the Fedwire Funds Service to effect the settlement of interbank obligations (as opposed to those that use the National Settlement Service). With respect to such special settlement arrangements, other charges may be assessed for each funds transfer into or out of the accounts used in connection with such arrangements.

⁷⁷ Offline files will be accepted only on an exception basis when a settlement agent's primary and backup means of transmitting settlement files are both unavailable.

⁷⁸ Any settlement arrangement that accrues less than \$60 during a calendar month will be assessed a variable amount to reach the minimum monthly fee.

FEDWIRE SECURITIES SERVICE 2019 FEE SCHEDULE (NON-TREASURY SECURITIES)

EFFECTIVE JANUARY 2, 2019.
BOLD INDICATES CHANGES FROM 2018 PRICES.

	Fee
Basic Transfer Fee	
Transfer or reversal originated or received	\$0.98
Surcharge ⁷⁹	
Offline origination & receipt surcharge	\$80.00
Monthly Maintenance Fees	
Account maintenance (per account)	\$57.50
Issue maintenance (per issue/per account)	\$0.77
Claims Adjustment Fee⁸⁰	\$1.00
GNMA Serial Note Stripping or Reconstitution Fee ⁸¹	\$9.00
Joint Custody Origination Surcharge ⁸²	\$46.00
Delivery of Reports – Hard Copy Reports to On-Line Customers	\$50.00

⁷⁹ This surcharge is set by the Federal Reserve Banks. It is in addition to any basic transfer or reversal fee.

⁸⁰ The Federal Reserve Banks offer an automated claim adjustment process only for Agency mortgage-backed securities.

⁸¹ This fee is set by and remitted to the Government National Mortgage Association (GNMA).

⁸² The Federal Reserve Banks charge participants a Joint Custody Origination Surcharge for both Agency and Treasury securities.

FEDLINE 2019 FEE SCHEDULE

EFFECTIVE JANUARY 2, 2019.
BOLD INDICATES CHANGES FROM 2018 PRICES.

	Fee
<u>FedComplete Packages (monthly)</u> ^{83, 84, 85}	
FedComplete 100A Plus	\$825.00
includes FedLine Advantage Plus package	
FedLine subscriber 5-pack	
7,500 FedForward transactions	
46 FedForward Cash Letter items	
70 FedReturn transactions	
14,000 FedReceipt [®] transactions	
35 Fedwire Funds origination transfers	
35 Fedwire Funds receipt transfers	
Fedwire participation fee	
1,000 FedACH origination items	
FedACH minimum fee – Forward Origination	
7,500 FedACH receipt items	
FedACH receipt minimum fee	
10 FedACH web return/NOC	
500 FedACH addenda originated	
1,000 FedACH addenda received	
100 FedACH Same-Day origination items	
FedACH account servicing	
FedACH settlement	
FedACH Same-Day origination participation fee	
FedComplete 100A Premier	\$900.00
includes FedLine Advantage Premier package	
Volumes included in the FedComplete 100A Plus package	
FedComplete 100C Plus	\$1,375.00
includes FedLine Command Plus package	

⁸³ FedComplete packages are all-electronic service options that bundle payment services with an access solution for one monthly fee.

⁸⁴ Packages with an 'A' include the FedLine Advantage channel, while packages with 'C' include the FedLine Command channel.

⁸⁵ FedComplete customers that use the email service would be charged the FedMail Email a la carte fee and for all FedMail-FedLine Exchange Subscriber 5-packs.

Volumes included in the FedComplete 100A Plus package		
FedComplete 200A Plus		\$1,350.00
includes	FedLine Advantage Plus package	
	FedLine subscriber 5-pack	
	25,000 FedForward transactions	
	46 FedForward Cash Letter items	
	225 FedReturn transactions	
	25,000 FedReceipt transactions	
	100 Fedwire Funds origination transfers	
	100 Fedwire Funds receipt transfers	
	Fedwire participation fee	
	2,000 FedACH origination items	
	FedACH minimum fee – forward origination	
	25,000 FedACH receipt items	
	FedACH receipt minimum fee	
	20 FedACH web return/NOC	
	750 FedACH addenda originated	
	1,500 FedACH addenda received	
	200 FedACH Same-Day origination items	
	FedACH account servicing	
	FedACH settlement	
	FedACH Same-Day origination participation fee	
FedComplete 200A Premier		\$1,425.00
includes	FedLine Advantage Premier package	
	Volumes included in the FedComplete 200A Plus package	
FedComplete 200C Plus		\$1,900.00
includes	FedLine Command Plus package	
	Volumes included in the FedComplete 200A Plus package	
FedComplete Excess Volume and Receipt Surcharge ⁸⁶		
	FedForward ⁸⁷	\$0.037/item
	FedReturn	\$0.8200/item
	FedReceipt	\$0.00005/item
	Fedwire Funds Origination	\$0.8200/item
	Fedwire Funds Receipt	\$0.082/item

⁸⁶ Per-item surcharges are in addition to the standard fees listed in the applicable priced services fee schedules.

⁸⁷ FedComplete customers will be charged \$4 for each FedForward cash letter over the monthly package threshold. This activity will appear under billing code 51998 in Service Area 1521 on a month-lagged basis.

FedACH Origination	\$0.0035/item
FedACH Receipt	\$0.00035/item
FedComplete credit adjustment	various
FedComplete debit adjustment	various
<u>FedLine Customer Access Solutions (monthly)</u>	
FedMail ⁸⁸	\$85.00
includes	<ul style="list-style-type: none"> FedMail access channel Check FedFoward, Fed Return and FedReceipt Services FedACH Download Advice and Settlement Information Fedwire Funds Offline Advices Check 21 Duplicate Notification Service Check Adjustments Funds Offline Advices Daily Statement of Account (Text) Daylight Overdraft Reports Monthly Statement of Service Charges (Text) Electronic Cash Difference Advices

⁸⁸ FedMail and FedLine Exchange packages do not include user credentials, which are required to access priced services and certain informational services. Credentials are sold separately in packs of five via the FedMail-FedLine Exchange Subscriber 5-pack.

FedLine Exchange ⁸⁸	\$40.00
includes E-Payments Directory (via manual download)	
FedLine Exchange Premier ⁸⁸	\$125.00
includes FedLine Exchange package	
E-Payments Routing Directory (via auto download)	
FedLine Web ⁸⁹	\$110.00
includes FedLine Web access channel	
Services included in the FedLine Exchange package	
Check FedForward, FedReturn and FedReceipt services	
Check 21 Duplicate Notification Service	
Check Adjustments	
FedACH Derived Returns and NOCs	
FedACH File, Batch and Item Detail Information	
FedACH Customer Profile Information	
FedACH Returns Activity Statistics	
FedACH Risk RDFI Alert Service	
FedACH Risk Returns Reporting Service	
FedCash [®] Services	
FedLine Web Plus ⁸⁹	\$160.00
includes FedLine Web package	
FedACH Risk Origination Monitoring Service	
FedACH FedPayments Reporter Service	
Check Large Dollar Return	
Check FedImage Services	
Account Management Information (AMI)	
Daily Statement of Account (PDF, Text)	
Monthly Account Services (SCRD File, Monthly Statement of Service Charges (PDF), Monthly Statement of Service Charges (Text))	
E-Payments Routing Directory (auto download)	

⁸⁹ FedLine Web and Advantage packages do not include user credentials, which are required to access priced services and certain informational services. Credentials are sold separately in packs of five via the FedLine Subscriber 5-pack.

FedLine Advantage ⁸⁹	\$415.00
includes	<ul style="list-style-type: none"> FedLine Advantage access channel One VPN device Services included in the FedLine Web package FedACH transactions Fedwire Originate and Receive Funds Transfer Fedwire Originate and Receive Securities Transfer National Settlement Service transactions Check Large Dollar Return Check FedImage Services Account Management Information with Intra-Day Download Search File Daily Statement of Account (PDF, Text) Monthly Account Services (SCRD File, Monthly Statement of Service Charges (PDF), Monthly Statement of Service Charges (Text))
FedLine Advantage Plus ⁸⁹	\$460.00
includes	<ul style="list-style-type: none"> FedLine Advantage package One VPN device FedACH Risk Origination Monitoring Service FedACH FedPayments Reporter Service Fedwire Funds FedPayments Manager Import/Export (less than or equal to 250 Fedwire transactions and one routing number per month) FedTransaction Analyzer[®] (less than 250 or equal to Fedwire transactions and one routing number per month) E-Payments Routing Directory (via auto download)
FedLine Advantage Premier ⁸⁹	\$570.00
includes	<ul style="list-style-type: none"> FedLine Advantage Plus package Two VPN devices Fedwire Funds FedPayments Manager Import/Export (more than 250 Fedwire transactions or more than one routing number in a given month) FedTransaction Analyzer (more than 250 Fedwire transactions or more than one routing number per month)
FedLine Command Plus	\$1,035.00
includes	<ul style="list-style-type: none"> FedLine Command access channel Services included in the FedLine Advantage Plus package One VPN device FedLine Command server certificates Fedwire Statement Services

Fedwire Funds FedPayments Manager Import/Export
 FedTransaction Analyzer
 Intra-Day File (I-Day CI File)
 Statement of Account Spreadsheet File (SASF)
 Financial Institution Reconciliation Data File (FIRD)
 Billing Data Format File (BDFF)

FedLine Direct Plus (Legacy)⁹⁰ \$4,000.00

includes FedLine Direct access channel
 One VPN device
 256K Dedicated WAN Connection
 Services included in the FedLine Command Plus package
 Two FedLine Direct server certificates
 Daily Overdraft Reports
 Treasury Check Information System (TCIS)

FedLine Direct Plus \$5,500.00

includes FedLine Direct access channel
 One VPN device
 2 Mbps Dedicated WAN Connection
 Services included in the FedLine Command Plus package
 FedLine Direct server certificates
 Treasury Check Information System (TCIS)
 Dual Vendors
 FedLine Direct Contingency Solution (ACH)
 Check 21 Services

FedLine Direct Premier (Legacy)⁹⁰ \$6,800.00

includes FedLine Direct Plus package (legacy)
 T1 dedicated WAN connection
 Two VPN devices

FedLine Direct Premier \$10,500.00

includes FedLine Direct Plus package (new)
 One additional dedicated WAN connection
 One Network Diversity
 Two VPN devices

⁹⁰ Limited to installed base only. All customers with 256K or T1 connections will need to upgrade to a minimum 2Mbps Ethernet line speed connection.

A la carte options (monthly)⁹¹

Electronic Access

FedMail - FedLine Exchange Subscriber 5-pack	\$15.00
FedLine Subscriber 5-pack (access to Web and Advantage)	\$80.00
Additional FedLine Direct Certificate ⁹²	\$100.00
Additional VPNs ⁹³	\$100.00
Additional WAN connections	
256K(Legacy) ⁹⁰	\$2,500.00
T1 (Legacy) ⁹⁰	\$3,200.00
2 Mbps	\$3,000.00
WAN Connection Upgrade	
10 Mbps ⁹⁴	\$1,700.00
30 Mbps ⁹⁴	\$3,000.00
50 Mbps ⁹⁴	\$4,000.00
100 Mbps ⁹⁴	\$7,000.00
200 Mbps ⁹⁴	\$11,000.00
FedLine International Setup (one-time fee)	\$5,000.00
FedLine Custom Implementation Fee ⁹⁵	various
Network Diversity	\$2,500.00
FedLine Direct Contingency Solution ⁹⁶	\$1,000.00
Check 21 Large File Delivery ⁹⁷	various

⁹¹ These add-on services can be purchased only with a FedLine Customer Access Service option.

⁹² Additional FedLine Direct Certificates available for FedLine Direct packages (legacy) only.

⁹³ Additional VPNs are available for FedLine Advantage, FedLine Command, and FedLine Direct packages only.

⁹⁴ These upgrades are only available for the new FedLine Direct packages and the Add'l 2M WAN connection. Fee is in addition to the FedLine Direct package fees or additional WAN fees.

⁹⁵ The FedLine Custom Implementation Fee is \$2,500 or \$5,000 based on the complexity of the setup.

⁹⁶ Fee only applies to customers in a legacy FedLine Direct package. This feature is included in the monthly fee for customers in the new FedLine Direct packages.

⁹⁷ Limited to installed base only. The fee currently ranges from \$1,400 to \$20,725 depending on the size, speed, and location of the connection. All customers will eventually need to upgrade to a minimum 2 Mbps Ethernet line speed connection with the associated FedLine Direct package.

FedMail Email (for customers with FedLine Web and above) ⁹⁸	\$20.00
FedMail Fax ⁹⁹	\$100.00
VPN Device Modification	\$200.00
VPN Device Missed Activation Appointment	\$175.00
VPN Device Expedited Hardware Surcharge	\$100.00
VPN Device Replacement or Move	\$300.00
E-Payments Automated Download (1-5 Add'l Codes)	\$75.00
E-Payments Automated Download (6-20 Add'l Codes)	\$150.00
E-Payments Automated Download (21-50 Add'l Codes)	\$300.00
E-Payments Automated Download (51-100 Add'l Codes)	\$500.00
E-Payments Automated Download (101-250 Add'l Codes)	\$1,000.00
E-Payments Automated Download (>250 Add'l Codes)	\$2,000.00
 Accounting Information Services (monthly)	
Cash Management System (CMS) Plus – Own report – up to six files with: ¹⁰⁰	
no respondent/sub-account activity	\$60.00
less than 9 respondent and/or sub-accounts	\$125.00
10-50 respondent and/or sub-accounts	\$250.00
51-100 respondents and/or sub-accounts	\$500.00
101-500 respondents and/or sub-accounts	\$750.00
>500 respondents and/or sub-accounts	\$1,000.00
End-of-Day Financial Institution Reconciliation Data (FIRD) File ¹⁰¹	\$150.00
Statement of Account Spreadsheet File ¹⁰²	\$150.00
Intra-day Download Search File (with AMI) ¹⁰³	\$150.00
 Other	
Software Certification	\$0.00 to \$8,000.00
Vendor Pass-Through Fee	various
Electronic Access Credit Adjustment	various
Electronic Access Debit Adjustment	various

⁹⁸ Available only to customers with a priced FedLine package.

⁹⁹ Limited to installed base only.

¹⁰⁰ Cash Management Service options are limited to plus and premier packages.

¹⁰¹ The End of Day Reconciliation File option is available for FedLine Web Plus, FedLine Advantage Plus, and Premier packages. It is available for no extra fee in FedLine Command Plus and Direct packages.

¹⁰² The Statement of Account Spreadsheet File option is available for FedLine Web Plus, FedLine Advantage Plus, and Premier packages. It is available for no extra fee in FedLine Command Plus and Direct packages.

¹⁰³ The Intra-day Download Search File option is available for the FedLine Web Plus package. It is available for no extra fee in FedLine Advantage and higher packages.

By order of the Board of Governors of the Federal Reserve System, November 15, 2018.

Ann Misback,

Secretary of the Board.

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